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## Back to the Future!

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Solar hot water systems have been used in the United States for over 100 years, but recent advances in collector design have increased efficiency while greatly improving reliability and appearance. Engineered for long, reliable life, today's collectors have a life expectancy of more than 20 years.

Once the hallmark of ecologically minded homeowners, solar thermal systems are increasingly being used by commercial enterprises to both lower operating costs and reduce emissions and "carbon footprints."

Stamford Property Holdings LLC, for example, recently installed twelve high-efficiency solar collectors at the Greenwich Ave. Car Wash in Stamford. The system generates over 250,000 gallons of warm water annually, improving the cleaning efficiency of the system and reducing the gas bill by well over \$1,000 a year. With the federal energy investment tax credit, accelerated depreciation and a rebate from the Connecticut Clean Energy Fund (CCEF), payback is in less than one year, and the internal rate of return is over 15%.

Additionally, facilities management company Franklin Enterprises LLC of New Haven installed solar hot water systems on ten large apartment buildings in Hamden. The systems, which range in size from 30 collectors to 45, collectively produce over 4.5 million gallons of hot water annually, providing about 60% of the buildings' hot water needs. During the summer, the systems supply all of the hot water for these apartments, so the boilers can be shut down altogether. Based on 2010 prices for natural gas, fuel savings for the ten systems are expected to exceed \$36,000 per year.

To encourage commercial facility owners and homeowners to install solar hot water systems in Connecticut, CCEF has established a rebate program. The incentive structure is based on the output of the system, with rates that are favorable for commercial and not-for-profit organizations. The CCEF rebates typically range from 35% to 50% of a project's cost; however, rebates up to 75% have been granted. Contractors must show evidence of proper training, experience and licensing to participate in the CCEF incentive program, which also includes a third-party inspection of the system upon completion to ensure high quality. Over 120 residential systems and 22 commercial systems have been funded since the program started in October 2009.

Information about federal and state incentives for solar hot water projects can be found at the Database for State Incentives for Renewables and Efficiency website [www.dsireusa.org](http://www.dsireusa.org). Information and application forms for the CCEF solar hot water rebate program can be found at: [www.ctcleanenergy.com/solarthermal](http://www.ctcleanenergy.com/solarthermal).

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